

Three Waters Review

LGNZ conference workshop
16 July 2018



Overview

- Context and background
- Key findings and unpicking the issues
- Clarifying the scope of this stage of the Review
- What outcomes is the Government looking for?
- Next steps

We are facing a number of challenging questions relating to the three waters – so government asked us to look at the system

How do we ensure communities and visitors across the country have access to safe and affordable drinking water, and swimmable rivers and coastal waters?

How can we achieve our housing aspirations and meet the increasing demand for water infrastructure driven by urban growth?

How can communities with small or declining rating bases fund renewals of ageing infrastructure? Or cope with the pressure placed on water services by tourists?

How do we meet increasing community expectations relating to drinking water quality, and wastewater and stormwater treatment and management?

How much will it cost to meet national directions and community aspirations for fresh and coastal water quality – and how can communities pay for this?

How do we respond to big issues like emergencies and natural hazards, climate change, and infrastructure resilience?

The Three Waters Review is exploring these challenges, and ways to address them

- **Three Waters Review established mid-2017 to:**
 - look into the challenges facing New Zealand's three waters system; and
 - develop options and recommendations for system-wide performance improvements.
- **Cross-government initiative** – led by Department of Internal Affairs, working with many other agencies including: Business, Innovation and Employment; Health; Environment; Treasury; Transport; MCDEM; Primary Industries
- **Initial work ran in parallel to Inquiry into Havelock North Drinking Water:** Stage 1 reported May 2017; Stage 2 reported December 2017
- **Three Waters Review 'key findings' provided to new Minister of Local Government and broader group of interested Ministers in November/December 2017**
 - These findings were consistent with Havelock North Inquiry's Stage 2 findings, but were not confined to drinking water (see next slides)
- **Three Waters Cabinet paper in April 2018 – agreement to further work:**
 - Regulatory arrangements for all three waters, including system oversight and transparency of information
 - Service delivery arrangements – funding and financing; capability and capacity – including Havelock North Inquiry recommendations for aggregated suppliers
- **Interconnected with work to respond to the Havelock North Inquiry's other recommendations, and broader work (such as Inquiry into Local Government Funding)**

Key findings and unpicking the issues

Our key findings point to a range of national and local issues, covering both the three waters regulatory regime and service delivery

Risks to human health and the environment in some parts of the country

Low levels of compliance, monitoring and enforcement of drinking water and environmental regulations

Minimal central oversight and poor connections across the system

Lack of protection, transparency and accountability for consumers, especially compared with other infrastructure sectors and overseas water systems

Affordability issues, driven by a range of funding pressures and financial challenges

Capacity, capability and sustainability challenges – particularly outside large scale organisations

Variable asset management and governance practices, and a lack of good asset information to support effective decision making

Unpicking the issues: **drinking water safety and public health risks**

- **The Inquiry into Havelock North Drinking Water concluded there is widespread systemic failure of water suppliers to meet the standards required to ensure the safe supply of drinking water**
- **Many suppliers do not meet the drinking water standards**
- **Risks of further failure** – driven by inadequacies in regulatory settings, capability and funding challenges, and compounded by contributory factors such as ageing water infrastructure, climate change, and intensive farming
- **The consequences of failure can be significant**
 - Havelock North – estimated 5500 people got sick; 45 hospitalised; up to 4 associated deaths; plus people with serious ongoing conditions
 - Poor quality or untreated drinking water are the possible source on ongoing risks of contamination and ongoing low level outbreaks of illnesses (Inquiry estimated 18,000 to 100,000 people fall ill every year from drinking water)
 - Direct and indirect economic costs (Inquiry estimated \$12.4 to \$23.7 million per year)

The Havelock North Inquiry argued there is a compelling case for aggregated, dedicated drinking water providers being established as an effective and affordable means to improve compliance, competence and accountability

It also recommended establishing an independent drinking water regulator

These recommendations are both being considered as part of the Government's response – but with a broader three waters lens, to ensure a system-wide approach is taken

Unpicking the issues: **environmental challenges and wastewater systems**

- **Information on environmental monitoring on the performance of the three waters system is patchy – giving scope for debate on performance and ‘facts’**
 - Lack of good quality, national-level information about the wastewater system, and its environmental impacts
 - Some regional environmental monitoring information available – but not consistent and hard to access
 - Wide variation in conditions set on resource consents across the country
- **However, the best available evidence indicates the wastewater system is facing considerable challenges, which are more significant and complex than for drinking water, and will be costly to address – e.g.**
 - Bow wave of upgrades to treatment plants – at least 1 in 10 plants estimated to be operating on expired consents, and 1 in 5 have consents due to expire in the next 4 years
 - 60% of councils use oxidation ponds to treat sewage, which can be problematic – moving to modern treatment systems would result in significant capital costs and higher operating costs, and involve more technical capability
 - Reduction of wastewater overflows – significant environmental/funding challenge, becoming unacceptable to many communities
- **Issues with compliance and enforcement**
 - Low level of formal action taken in relation to wastewater discharges
 - If compliance and enforcement are tightened, councils will come under pressure to comply with existing consent conditions and rising environmental standards

There are questions about whether the current regulatory regime is providing good environmental outcomes in respect of water services

We think the environmental performance of the three waters is going to be much more challenging and expensive to address than drinking water alone

The three waters system has a complex regulatory environment, and many organisations have a role in regulation, monitoring and/or service delivery

National

Ministry for the Environment

sets the national environmental direction under Resource Management Act, through tools such as the National Policy Statement for Freshwater, national environmental standards, and regulations

Ministry of Health

responsible for national level regulation of drinking water, including setting standards, appointing drinking water assessors, and reporting annually on compliance

Department of Internal Affairs provides policy advice on Local Government Act 2002 & Fire and Emergency NZ Act

Controller and Auditor General conducts annual audit of local authorities, and ad hoc inquiries

Ministry of Civil Defence and Emergency Management has national level responsibility for civil defence emergencies

Fire and Emergency NZ is the national fire service

Water New Zealand (NGO) sector organisation that conducts an annual performance review of local authority services

Regional

16 regional & unitary authorities have responsibility for regional environmental planning, issuing consents, monitoring compliance and enforcement

36 Drinking Water Assessors, employed by **20 DHBs** provide regional level inspection for compliance with standards and water safety plans

Local authorities and lifeline utilities provide regional level civil defence emergency planning and response

Local

67 territorial & unitary authorities provide drinking water, stormwater, and wastewater services to their communities, meeting planning and reporting requirements under the Local Government Act
600,000 people on very small, tanker & self-supplied drinking water
270,000 people on private wastewater systems (e.g. septic tanks)

Unpicking the issues: **lack of central oversight and protection for consumers**

- **A complex regulatory environment, with poor connections between regulatory functions and minimal central oversight of the three waters system**
- **A lack of information to allow consumers and other interested parties to assess the performance of three waters services – and a lack of transparency about the prices they are paying for those services**
 - This means consumers cannot easily assess things like: whether there are risks associated with their drinking water; whether environmental standards are being met; levels of monitoring and enforcement; or how well publicly-owned assets are being managed on their behalf
- **Three waters networks have strong natural monopoly characteristics**
 - New Zealand is unusual in not having an economic regulation regime to protect water consumers from the exercise of monopoly power (this is common internationally for water, and in New Zealand for other utilities)
 - Monopoly risks have traditionally been managed via public ownership and local government democratic arrangements – utilising the overlap of owners and consumers
 - Absence of economic regulation means we don't have good information on the condition of assets and whether the right levels of investment are being planned and delivered

Our work is exploring the potential for an economic regulatory regime, including whether an information disclosure regime would improve outcomes

We are also looking to improve central oversight, and connections across government and the wider system

Unpicking the issues: **funding challenges – drinking water and wastewater infrastructure upgrades**

Proceeding with Havelock North Inquiry recommendations for mandatory compliance with the Drinking Water Standards and mandatory treatment carries significant costs – according to research by Beca

- Estimates of at least **\$309 to \$574 million** in capital costs to upgrade 611 water treatment systems (serving 1.4 million people), plus estimated annual operating costs of \$11 to \$21 million
- Councils own only about two-thirds of the infrastructure that would need upgrading – the rest is owned by other organisations, such as community and private providers, which tend to serve very small communities

Councils are facing even bigger costs for wastewater infrastructure upgrades to meet the National Policy Statement for Freshwater Management – according to a draft report by GHD and Boffa Miskell

- A range of **\$1.4 to \$2.1 billion** overall estimated capital costs to upgrade councils' wastewater infrastructure to reach Grade B attribute levels for E. coli, nitrogen and ammonia, plus national ongoing operating costs estimated at \$60 to \$90 million per year
- In both cases, households in some parts of the country would face much higher costs than others – affordability could be particularly challenging for smaller councils and communities, in certain regions

This is only part of the picture regarding drinking water and wastewater infrastructure costs

- Likely to be far greater costs associated with upgrading wastewater services and underground pipes to reduce wastewater overflows to rivers and beaches
- Excludes costs of discharging to the marine environment – over half of wastewater treatment plants discharge in this way

Unpicking the issues: **other funding and financing challenges**

Climate change is predicted to have a major impact on three waters infrastructure/services, but the costs associated with responding to this challenge are unknown

- Different places will face different challenges – e.g. increasing droughts, intense rainfall, and sea level rise
- Responses will also differ – such as providing for additional water storage, repairing and replacing wastewater and stormwater reticulation, and investing in stormwater pumping facilities. All of these activities will be costly

Tourism pressures affect a number of ‘hot spots’ around the country

- Infrastructure should be designed to service peak capacity, while being paid for largely by the ratepayer base – this can be challenging for smaller communities in areas that receive a lot of visitors

A future large-scale emergency would result in significant rebuild and repair costs

- The Crown and councils would be exposed to a significant liability if a large-scale emergency occurred

High growth councils are facing financial constraints, which may be inhibiting their ability to provide water infrastructure needed to support development

- Debt can be used to finance growth-related infrastructure, but the level of borrowing by NZ councils is being constrained by both behavioural and mandated factors

Other councils and communities are also facing affordability constraints relating to water infrastructure

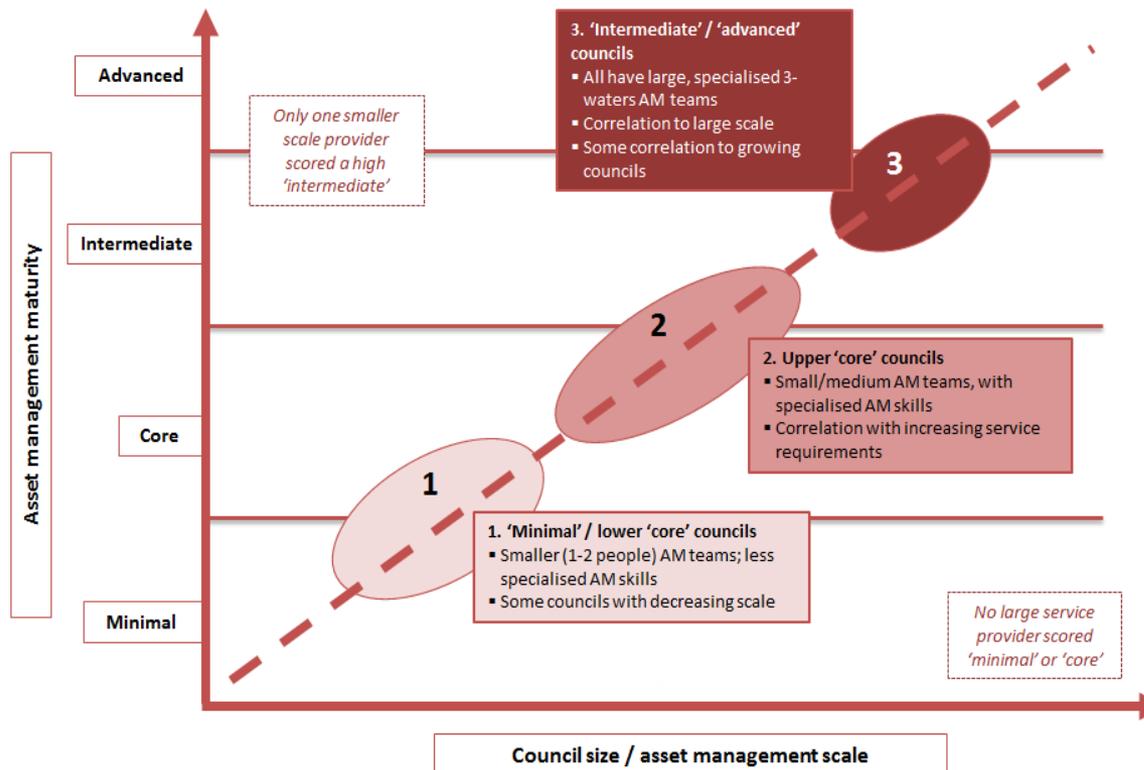
- This can mean only the most pressing work is undertaken, while other work is delayed or not done

Unpicking the issues: three waters asset management capability

Our research indicates that asset management capability across the system is mixed – and relatively low in some places

While most councils have the basic, underpinning ‘architecture’ of sensible asset management:

- the quality of asset management plans, frameworks and strategy documents varies considerably across councils
- above this basic level, **asset management ‘maturity’ is commensurate with the scale of the organisation*** – greater capability and capacity are found in CCOs and larger councils, while smaller councils tend to have minimal or core capabilities only



*Based on a sample of 22 councils (6 rural, 10 provincial, 6 metro/unitary). Of this sample, 1 is 'advanced'; 4 'intermediate'; 12 'core'; and 5 'minimal'

Unpicking the issues: **three waters asset management information and data quality**

Understanding asset performance is an essential part of good asset and risk management. A lack of robust data means we do not have a comprehensive, reliable picture of the state of water assets, how much renewal/improvement is needed, or timing and costs

- Councils generally have low confidence in their understanding of the condition of their assets, but this is less severe in larger councils
- Councils have attempted to understand asset criticality, but maturity of understanding varies by scale
- Many councils do not have mature data, information or quality management systems and processes; in smaller councils, there is a particularly strong reliance on the knowledge of a few individuals
- There are examples of councils of all sizes that do not conduct frequent asset condition assessments

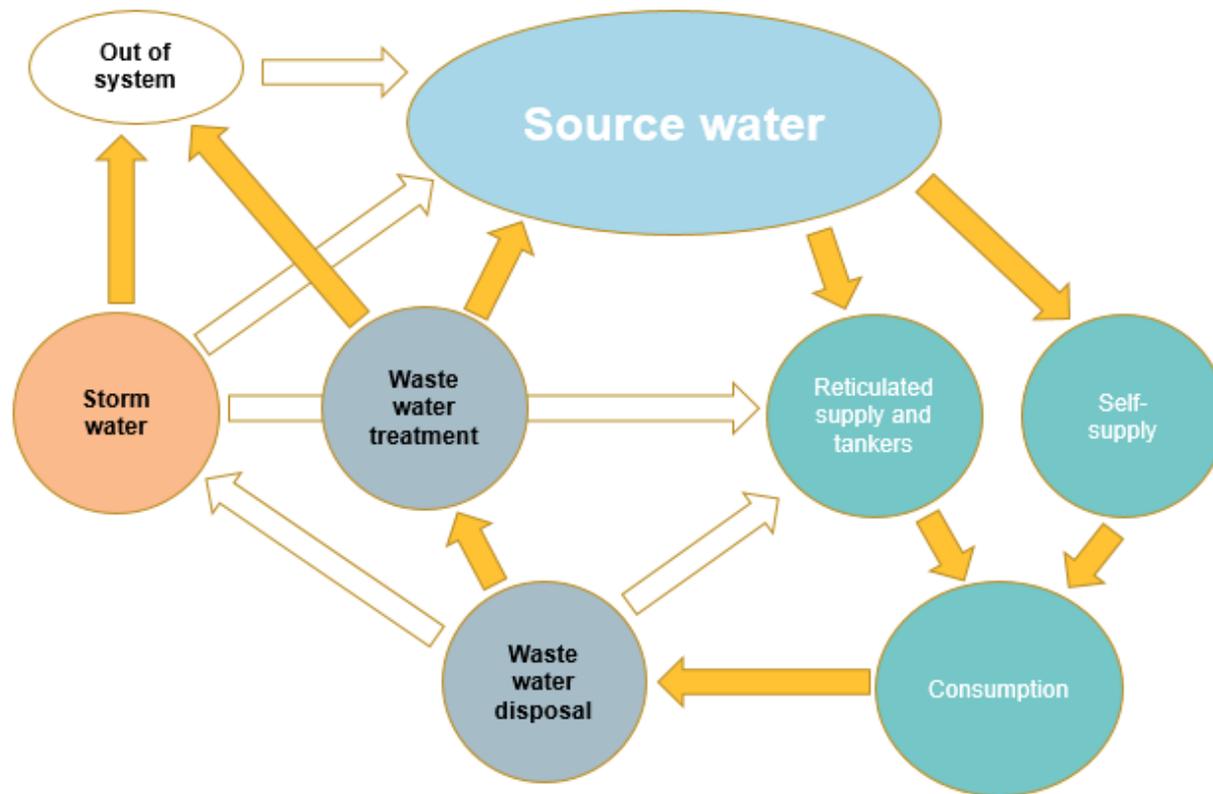
According to the Office of the Auditor-General's 2016/17 local government audits, "Relevant and reliable information about assets remains a challenge for local authorities"

- About 45% of the potable and wastewater networks, and 52% of stormwater networks, are categorised as "ungraded"
- "We continue to be concerned that local authorities might not be investing enough to ensure ongoing delivery of services. ... This trend is most concerning in some of the local authorities' core infrastructure assets, such as water supply and flood protection assets."
- There is systemic underspend of capital expenditure: in 2016/17 capital expenditure was \$3.8 billion, which was 78% of the budgeted \$4.8 billion

Clarifying the scope of the Review

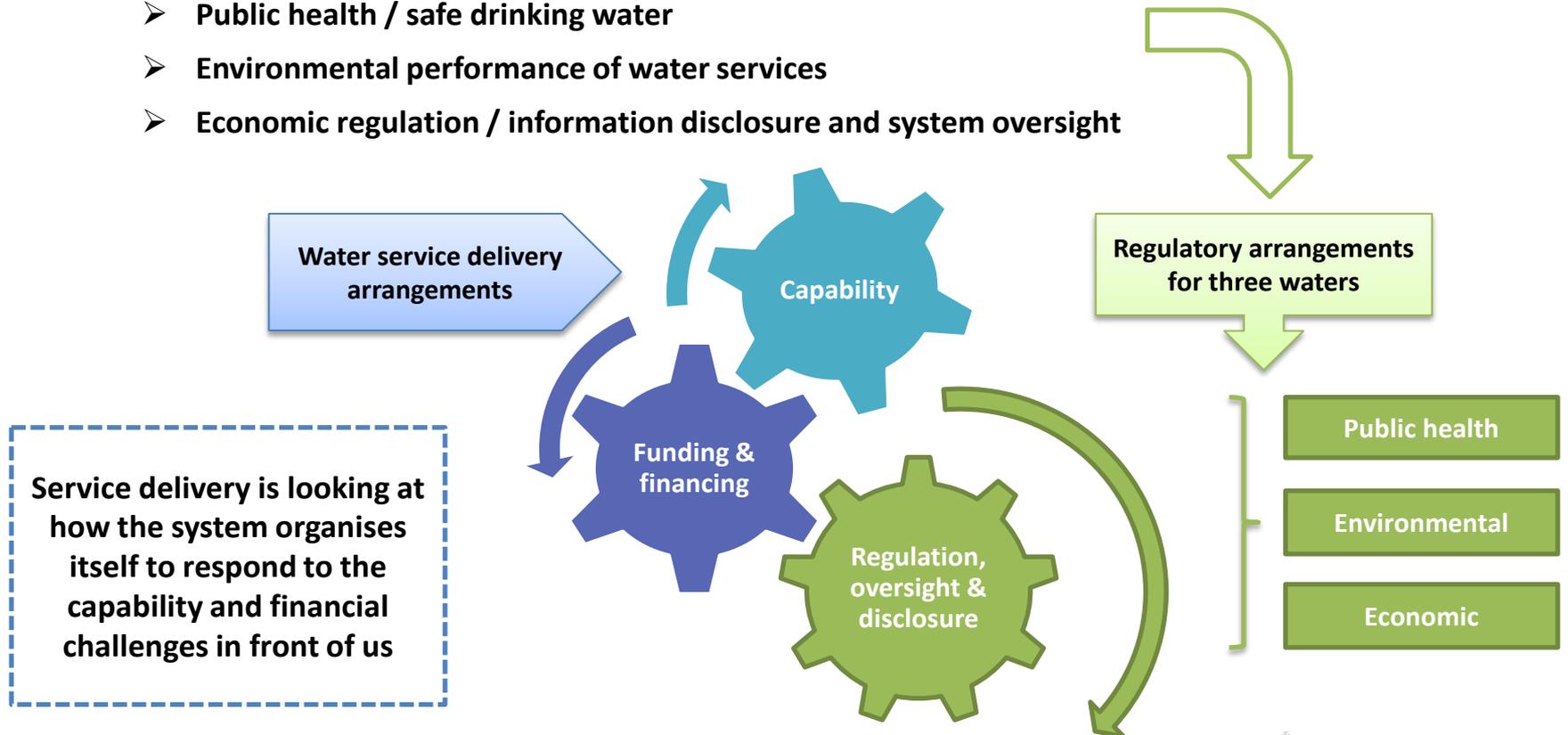
Taking a system-wide approach is essential

What happens in one part of the three waters system has implications for the quality and outcomes related to other parts of the system



Clarifying the scope of this stage of the Review

- The Government is taking a broad, system-wide perspective – covering:
 - issues and options relating to the regulatory regime and service delivery arrangements
 - all three waters – drinking water, wastewater, and stormwater
- Regulatory scope is:
 - Public health / safe drinking water
 - Environmental performance of water services
 - Economic regulation / information disclosure and system oversight



What outcomes is the Government looking for?

What outcomes is the Government seeking for the three waters system?

Specific outcomes are still being discussed with Ministers – but likely to relate to:

- ensuring safe, reliable, fit-for-purpose drinking water
- better environmental performance
- three waters services that contribute to the wider social (eg housing), environmental and economic outcomes that are important to New Zealand
- achieving the above outcomes in ways that are affordable for our communities

Broader goals relate to things like:

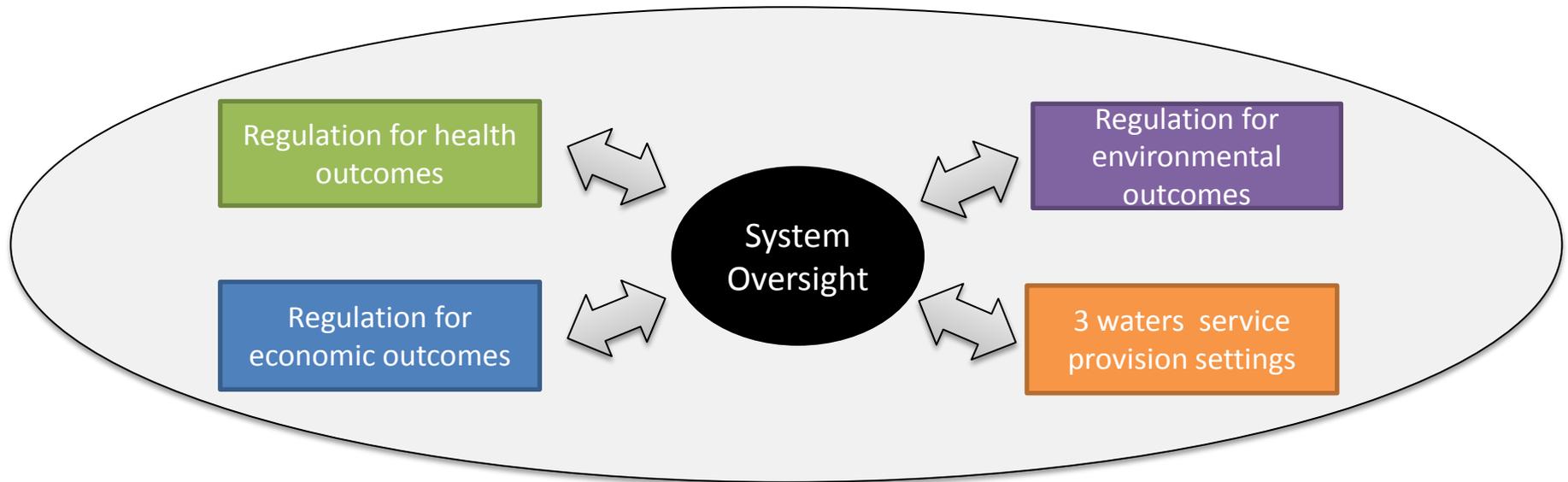
Delivering the water infrastructure needed to support growth

Protecting/enhancing our reputation as a tourist destination and export market

Continuity of water services in the face of climate change and natural disasters

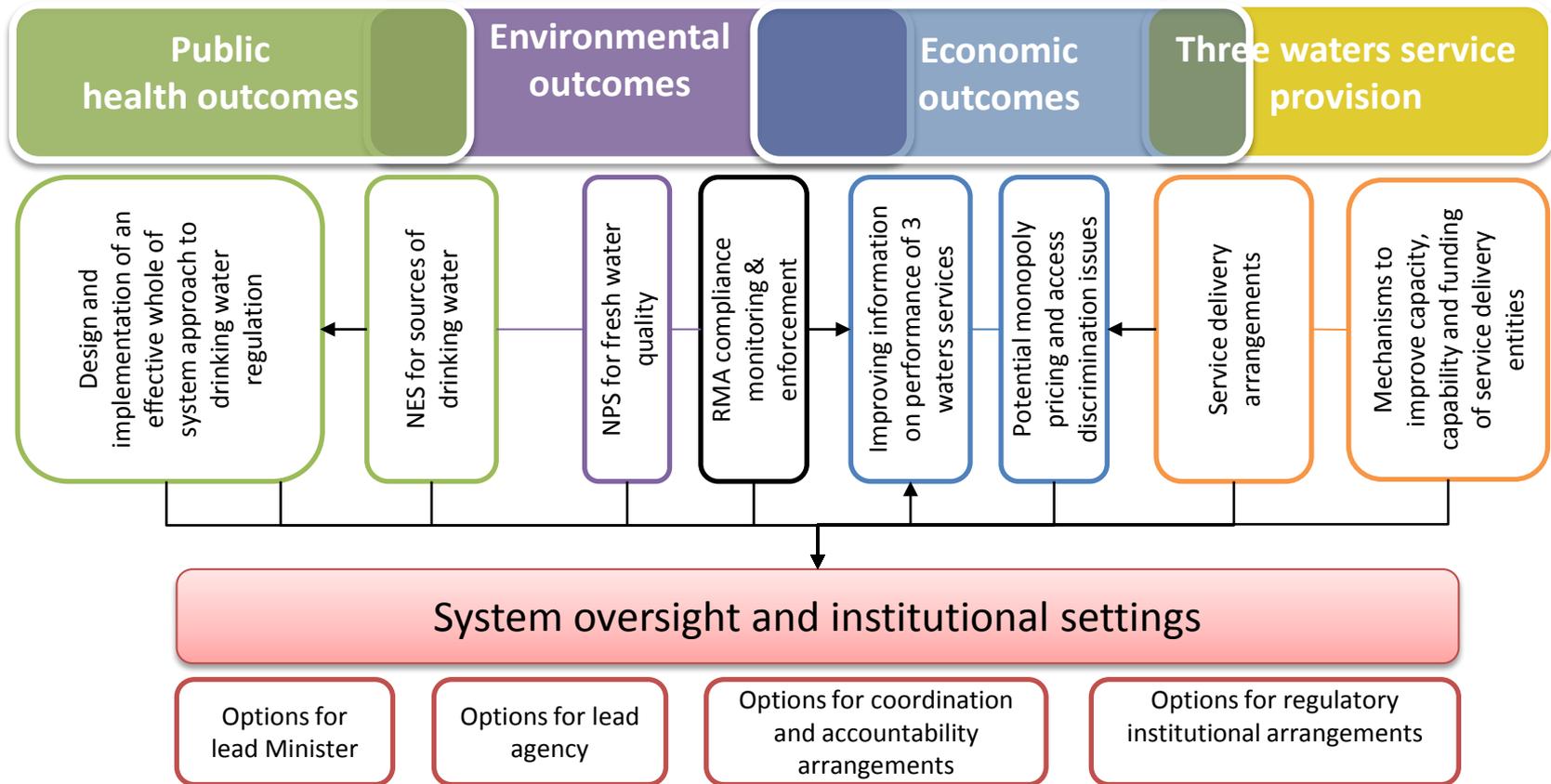
What options are being explored?

An integrated regulatory system for three waters services



The three waters system is complex and interdependent

Regulatory design will take time, and needs to happen at the same time as development of options for service delivery arrangements



Next steps

- This is an ongoing conversation
 - LGNZ reference group established to have high trust conversation with officials. Also engaging directly with local government through a variety of other channels – Metro Sector, Rural and Provincial, Mayoral Forums, National Council
 - Governance of the Review is provided by a large group of Ministers with interests in three waters services and outcomes
- Next milestone is Cabinet consideration of high level options in October 2018
- Will be further public engagement in 2019 on the challenges and options for how the system can respond to them
- Work on a future regulatory regime likely to seek government decisions in 2019. Clear priority is public health, safe drinking water

Further information at: <https://www.dia.govt.nz/Three-waters-review>